



October 18, 2019

non responsive based on revised scope

Environmental Restoration, LLC
1666 Fabick Drive
Fenton, MO 63026

Certificate of Analysis

Revised Report - 10/18/2019 10:40:38 AM - See workorder comment section for explanation

Project Name:	Soil Samples	Workorder:	3062994
Purchase Order:		Workorder ID:	Shiloh Church Rd

Dear Mr. Keegan:

Enclosed are the analytical results for samples received by the laboratory on Thursday, October 10, 2019.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact non responsive based on revised scope
non responsive based on revised scope.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

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This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

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SAMPLE SUMMARY

Workorder: 3062994 Shiloh Church Rd

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3062994001	Mound 6	Solid	10/8/2019 15:06	10/10/2019 09:23	Collected by Client
3062994002	Mound 7	Solid	10/8/2019 15:30	10/10/2019 09:23	Collected by Client
3062994003	North Pile 2 - East	Solid	10/9/2019 15:27	10/10/2019 09:23	Collected by Client
3062994004	North Pile 2 - West	Solid	10/9/2019 15:45	10/10/2019 09:23	Collected by Client

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SAMPLE SUMMARY

Workorder: 3062994 Shiloh Church Rd

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3062994 Shiloh Church Rd

Lab ID: 3062994001

Date Collected: 10/8/2019 15:06

Matrix: Solid

Sample ID: Mound 6

Date Received: 10/10/2019 09:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	7.1		%	0.1	S2540G-11			10/11/19 11:45	AXD	
Total Solids	92.9		%	0.1	S2540G-11			10/11/19 11:45	AXD	
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	10/15/19 13:20	SXC	10/17/19 12:57	SRT	A1
Barium, Total	ND		mg/L	2.8	SW846 6010C	10/15/19 13:20	SXC	10/17/19 12:57	SRT	A1
Cadmium, Total	1.1		mg/L	0.011	SW846 6010C	10/15/19 13:20	SXC	10/17/19 12:57	SRT	A1
Chromium, Total	ND		mg/L	0.028	SW846 6010C	10/15/19 13:20	SXC	10/17/19 12:57	SRT	A1
Lead, Total	1.4		mg/L	0.033	SW846 6010C	10/15/19 13:20	SXC	10/17/19 12:57	SRT	A1
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/15/19 11:20	AHI	10/15/19 16:38	AHI	A
Selenium, Total	ND		mg/L	0.11	SW846 6010C	10/15/19 13:20	SXC	10/17/19 12:57	SRT	A1
Silver, Total	ND		mg/L	0.022	SW846 6010C	10/15/19 13:20	SXC	10/17/19 12:57	SRT	A1

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ANALYTICAL RESULTS

Workorder: 3062994 Shiloh Church Rd

Lab ID: 3062994002

Date Collected: 10/8/2019 15:30

Matrix: Solid

Sample ID: Mound 7

Date Received: 10/10/2019 09:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	5.4		%	0.1	S2540G-11			10/11/19 11:45	AXD	
Total Solids	94.6		%	0.1	S2540G-11			10/11/19 11:45	AXD	
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:01	SRT	A1
Barium, Total	ND		mg/L	2.8	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:01	SRT	A1
Cadmium, Total	0.45		mg/L	0.011	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:01	SRT	A1
Chromium, Total	ND		mg/L	0.028	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:01	SRT	A1
Lead, Total	9.6		mg/L	0.033	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:01	SRT	A1
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/15/19 11:20	AHI	10/15/19 16:40	AHI	A
Selenium, Total	ND		mg/L	0.11	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:01	SRT	A1
Silver, Total	ND		mg/L	0.022	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:01	SRT	A1

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ANALYTICAL RESULTS

Workorder: 3062994 Shiloh Church Rd

Lab ID: **3062994003**
Sample ID: **North Pile 2 - East**

Date Collected: 10/9/2019 15:27 Matrix: Solid
Date Received: 10/10/2019 09:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	6.8		%	0.1	S2540G-11			10/11/19 11:45	AXD	
Total Solids	93.2		%	0.1	S2540G-11			10/11/19 11:45	AXD	
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:12	SRT	A1
Barium, Total	ND		mg/L	2.8	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:12	SRT	A1
Cadmium, Total	2.3		mg/L	0.011	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:12	SRT	A1
Chromium, Total	ND		mg/L	0.028	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:12	SRT	A1
Lead, Total	4.7		mg/L	0.033	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:12	SRT	A1
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/15/19 11:20	AHI	10/15/19 16:41	AHI	A
Selenium, Total	ND		mg/L	0.11	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:12	SRT	A1
Silver, Total	ND		mg/L	0.022	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:12	SRT	A1

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ANALYTICAL RESULTS

Workorder: 3062994 Shiloh Church Rd

Lab ID: **3062994004**
Sample ID: **North Pile 2 - West**

Date Collected: 10/9/2019 15:45 Matrix: Solid
Date Received: 10/10/2019 09:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Moisture	7.2		%	0.1	S2540G-11			10/11/19 11:45	AXD	
Total Solids	92.8		%	0.1	S2540G-11			10/11/19 11:45	AXD	
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:16	SRT	A1
Barium, Total	ND		mg/L	2.8	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:16	SRT	A1
Cadmium, Total	3.1		mg/L	0.011	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:16	SRT	A1
Chromium, Total	ND		mg/L	0.028	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:16	SRT	A1
Lead, Total	4.4		mg/L	0.033	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:16	SRT	A1
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	10/15/19 11:20	AHI	10/15/19 16:42	AHI	A
Selenium, Total	ND		mg/L	0.11	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:16	SRT	A1
Silver, Total	ND		mg/L	0.022	SW846 6010C	10/15/19 13:20	SXC	10/17/19 13:16	SRT	A1

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3062994 Shiloh Church Rd

Lab ID	Sample ID	Analysis Method	Prep Method
3062994001	Mound 6	S2540G-11	
3062994001	Mound 6	SW846 6010C	SW846 3015
3062994001	Mound 6	SW846 7470A	SW846 7470A
3062994002	Mound 7	S2540G-11	
3062994002	Mound 7	SW846 6010C	SW846 3015
3062994002	Mound 7	SW846 7470A	SW846 7470A
3062994003	North Pile 2 - East	S2540G-11	
3062994003	North Pile 2 - East	SW846 6010C	SW846 3015
3062994003	North Pile 2 - East	SW846 7470A	SW846 7470A
3062994004	North Pile 2 - West	S2540G-11	
3062994004	North Pile 2 - West	SW846 6010C	SW846 3015
3062994004	North Pile 2 - West	SW846 7470A	SW846 7470A

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301 Fulling Mill Road
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /
SAMPLER. INSTRUCTIONS ON THE BACK.



Client Name: <u>Environmental Restoration, LLC</u>		Container Type: <u>CL</u>	W.O. Temp: _____ Therm ID: _____	
Address: <u>1666 Parkside Dr</u>		Container Size: <u>16oz</u>	Analyst Initials: _____	
Fenton, MO 63026		Penicillin: <u>MP</u>	Courier/Tracking #: _____	
Contact: <u>CHARLIE KERRAN</u>		Purchase Order #: _____		
Phone#: <u>604 304 8996</u>		Project Comments: <u>5 DAY TAT</u>		
Project Name#: <u>SHILOH CHURCH ROAD</u>		ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor		
Bill To: <u>3-5467</u>		<input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment		
TAT: <input type="checkbox"/> Normal-Standard TAT is 10-12 business days. <u>5 Day</u>		Other: _____		
Date Required: <u>10/18/19</u>		Sample/COC Comments: <u>Hold sample for 60 days</u>		
Email? <input checked="" type="checkbox"/>				
Fax? <input type="checkbox"/>				
Sample Description/Location (as it will appear on the lab report)		Date Collected mm/dd/yy	Time hh:mm	Enter Number of Containers Per Sample or Field Results Below.
1 MOUND 6		10/18/19	1506	1
2 MOUND 7		10/18/19	1530	1
3 North Pile 2 - East		10/19/19	1537	1
4 North Pile 2 - West		10/19/19	1545	1
5				
6				
7				
8				
9				
10				
SAMPLER COMMENTS: <u>START DAVE LOMOS NO Hg Analysis required</u>				
Relinquished By / Company Name		Date	Time	Received By / Company Name
[Redacted]				2 Fedex
3 FEDEX				4 [Redacted]
5 [Redacted]				6 [Redacted]
7 [Redacted]				8 [Redacted]
9 [Redacted]				10 [Redacted]
Special Processing		Standard Data Deliverables		State Samples Collected In
<input checked="" type="checkbox"/> USACE		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> CLP-like <input type="checkbox"/> USACE/DOD		<input type="checkbox"/> NY <input type="checkbox"/> NJ <input type="checkbox"/> PA <input checked="" type="checkbox"/> VA
Sample Disposal		Reportable to PA DEP?		Lab Special
<input checked="" type="checkbox"/> Lab <input type="checkbox"/> Special		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
PWSID #		EDDS: Format Type		other



301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

Condition of Sample Receipt Form

Client: Environmental Restoration Work Order #: 3062994 Initials: CS Date: 10/10

1. Were airbills / tracking numbers present and recorded?..... NONE ☒ YES ☐ NO
Tracking number: 7160 3654 3957
2. Are Custody Seals on shipping containers intact?..... NONE ☒ YES ☐ NO
3. Are Custody Seals on sample containers intact?..... NONE ☒ YES ☐ NO
4. Is there a COC (Chain-of-Custody) present?..... ☒ YES ☐ NO
5. Are the COC and bottle labels complete, legible and in agreement?..... ☒ YES ☐ NO
- 5a. Does the COC contain sample locations?..... ☒ YES ☐ NO
- 5b. Does the COC contain date and time of sample collection for all samples?..... ☒ YES ☐ NO
- 5c. Does the COC contain sample collectors name?..... ☒ YES ☐ NO
- 5d. Does the COC note the type(s) of preservation for all bottles?..... ☒ YES ☐ NO
- 5e. Does the COC note the number of bottles submitted for each sample?..... ☒ YES ☐ NO
- 5f. Does the COC note the type of sample, composite or grab?..... ☒ YES ☐ NO
- 5g. Does the COC note the matrix of the sample(s)?..... ☒ YES ☐ NO
6. Are all aqueous samples requiring preservation preserved correctly?..... N/A ☒ YES ☐ NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?..... ☒ YES ☐ NO
8. Are all samples within holding times for the requested analyses?..... ☒ YES ☐ NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)..... ☒ YES ☐ NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?..... N/A ☒ YES ☐ NO
11. Were the samples received on ice?..... ☒ YES ☐ NO
12. Were sample temperatures measured at 0.0-6.0°C..... ☒ YES ☐ NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below..... YES ☒ NO
- 13a. Are the samples required for SDWA compliance reporting?..... N/A ☒ YES ☐ NO
- 13b. Did the client provide a SDWA PWS ID#?..... N/A ☒ YES ☐ NO
- 13c. Are all aqueous unpreserved SDWA samples pH 5-9?..... N/A ☒ YES ☐ NO
- 13d. Did the client provide the SDWA sample location ID/Description?..... N/A ☒ YES ☐ NO
- 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?..... N/A ☒ YES ☐ NO

Cooler #: _____

Temperature (°C): 5

Thermometer ID: 403

Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):

Rev. 4/29/2019

ALS